



March 24, 2008

Mary A. Siders, PhD.  
Bureau of Corrective Actions  
Nevada Division of Environmental Protection  
901 South Stewart Street, Suite 4001  
Carson City, Nevada 89701

*For:*  
National Dry Cleaners, Inc.  
c/o Randall Jackson  
Williams & Company Consulting, Inc  
9237 Ward Parkway, Suite 114.  
Kansas City, MO 64114

*and:*  
Al Phillips the Cleaners, Inc.  
3250 West Ali Baba Lane. Suite C-F  
Las Vegas, Nevada 89119

**Re:     Installation of Additional Downgradient Groundwater Monitoring Wells  
         Maryland Square Shopping Center  
         3661 South Maryland Parkway, Las Vegas, Nevada  
         Facility ID: H-000086**

Attn: Dr. Siders

At the request of our client Al Phillips the Cleaners, Inc. (Al Phillips), URS Corporation (URS) has prepared this letter report to present the findings of the installation of additional down gradient groundwater monitoring wells during March 2008. These wells were installed for further environmental site characterization of a tetrachloroethene (PCE) plume in the residential area along Spencer Street in Las Vegas, Nevada (Figure 1). Three permanent groundwater monitoring wells were installed and sampled as requested by the Nevada Division of Environmental Protection (NDEP, letter dated December 14, 2007). Also, one additional borehole was drilled. A summary of the site background, investigation methods, and quality control measures were included in the *Monitoring Well Installation Work Plan* dated September 24, 2007, that was submitted to NDEP and approved by NDEP in a letter dated October 10, 2007.

The purpose of the scope of work presented in the work plan was to evaluate and further characterize groundwater impact in the residential area downgradient of the site to better define the leading edge of the dissolved PCE plume. The scope of work was slightly modified in the field based on site conditions. The modified scope of work was accomplished by performing the following tasks:

- Drill and sample one borehole;
- Install and sample three new groundwater monitoring wells;

URS Corporation  
811 Grier Drive  
Las Vegas, NV 89119  
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- Evaluate the groundwater gradient and flow direction in the area of the plume;
- Evaluate the downgradient extent of PCE impact to groundwater based on the additional groundwater analysis;
- Initiate groundwater monitoring for the three new wells;
- Survey the elevations of the three new wells;
- Report findings of the additional groundwater assessment.

### **Investigation**

One borehole (B-T2) was drilled and sampled on March 4, 2008. The sample was submitted to a Nevada-certified analytical laboratory with a 24-hour turn-around time, and the analytical data was used to help select a location for well MW-33. Three permanent wells (MW-31, MW-32, and MW-33) were installed and developed from March 4 through 6, and sampled on March 17, 2008. The locations of these wells are shown in Figure 2. Well MW-31 is located on north side of Tioga Way at the intersection of Cochise Lane; well MW-32 was installed at the location of borehole B-T (drilled October 2007) on the north side of Cherokee Lane near the intersection of Spencer Street; and well MW-33 is located on south-bound Spencer Street at the intersection of Commanche Drive. The borehole logs, which include well construction information, are attached. Other well characteristics, including top of casing elevation, are summarized in Table 1. Groundwater sample collection logs for the permanent wells, which include measurements of field parameters during purging of the wells, are also attached. Groundwater samples were submitted to a Nevada certified analytical laboratory for analysis of volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) method 8260B. Residual investigative materials were placed in 55-gallon drums and are being disposed of in accordance with state and federal regulations.

**TABLE 1**  
**SUMMARY OF ADDITIONAL DOWN GRADIENT WELL CHARACTERISTICS**  
**Maryland Square Shopping Center**

Well ID	Install Date	Top of Casing Elevation (feet above MSL)	Screen Depth (feet BTOC)	Sample Date	Depth to Water (feet BTOC)
<b>SHALLOW WELLS</b>					
<b>MW-31</b>	3/5/2008	1937.93	13.5-33.5	3/17/2008	15.23
<b>MW-32</b>	3/4/2008	1952.82	13.5-33.5	3/17/2008	17.25
<b>MW-33</b>	3/6/2008	1950.92	13.5-33.5	3/17/2008	16.02

Note: \*BTOC = below top of casing, MSL = mean sea level



### **Analytical Results**

Well locations and PCE concentrations are shown on Figure 2, and Table 2 summarizes analytical data for VOCs, specifically PCE, trichloroethene (TCE), and cis-1,2-dichloroethene. The laboratory analytical reports are attached.

**TABLE 2**  
**SELECTED VOC CONCENTRATIONS IN ADDITIONAL DOWN**  
**GRADIENT MONITORING WELLS AND BOREHOLE**  
**Maryland Square Shopping Center**

Well ID	Sample Date	Concentration (µg/L)		
		perchloroethylene (PCE)	trichloroethene (TCE)	cis-1,2-Dichlorethene
B-T2	3/4/2008	130	ND	ND
MW-31	3/17/2008	49	ND	ND
MW-32	3/17/2008	720	ND	ND
MW-33	3/17/2008	2.4	ND	ND

Note: µg/L = micrograms per liter, ND = not detected above the laboratory reporting limit

### **Findings**

Groundwater elevation contours for March 2008 are shown in Figure 3. In general, groundwater beneath the residential neighborhood, north of Seneca Lane, appears to flow in a slight northeasterly direction. As groundwater crosses Spencer Street, it appears to flow in a slight southeasterly direction.

Figure 2 shows the PCE concentrations from select down gradient shallow monitoring wells (MW-18 and MW-22 through MW-30) sampled during the December 2008 sampling event and PCE concentrations detected in the new wells (MW-31, MW-32 and MW-33). The concentration of PCE detected in well MW-33 on Spencer Street at the corner of Commanche Drive was below the Nevada Drinking Water Standards Maximum Contaminant Level of 5 micrograms per liter (µg/L). The PCE concentrations detected in well MW-32 (same location as temporary well B-T on Cherokee Lane) and borehole B-T2 on Spencer Street were 720 µg/L and 130 µg/L, respectively. The PCE concentration detected in well MW-31 located on Tioga Way at the intersection Cochise Lane was 49 µg/L.

URS has retained Mr. Scott Ball, now with MWH Americas, Inc., for a period of time as the CEM of record for this project due to his past experience on this project. Mr. Ball had direct oversight of URS staff on this scope of work and was involved in evaluation of the resulting data.



Al Phillips The Cleansers  
March 24, 2008  
Page 4

NDEP requires the following statements to be provided by the responsible Environmental Manager for this project (per NRS 459.500):

*"I hereby certify that all laboratory analytical data was generated by a laboratory certified by the NDEP for each constituent and media presented herein."*

*"I, Scott Ball, hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state, and local statutes, regulations and ordinances."*

Scott Ball, C.E.M. 1316, expires 10/15/09

If you have questions regarding this data please contact the undersigned at (702) 492-7923 or at [lisa\\_lowe@urscorp.com](mailto:lisa_lowe@urscorp.com).

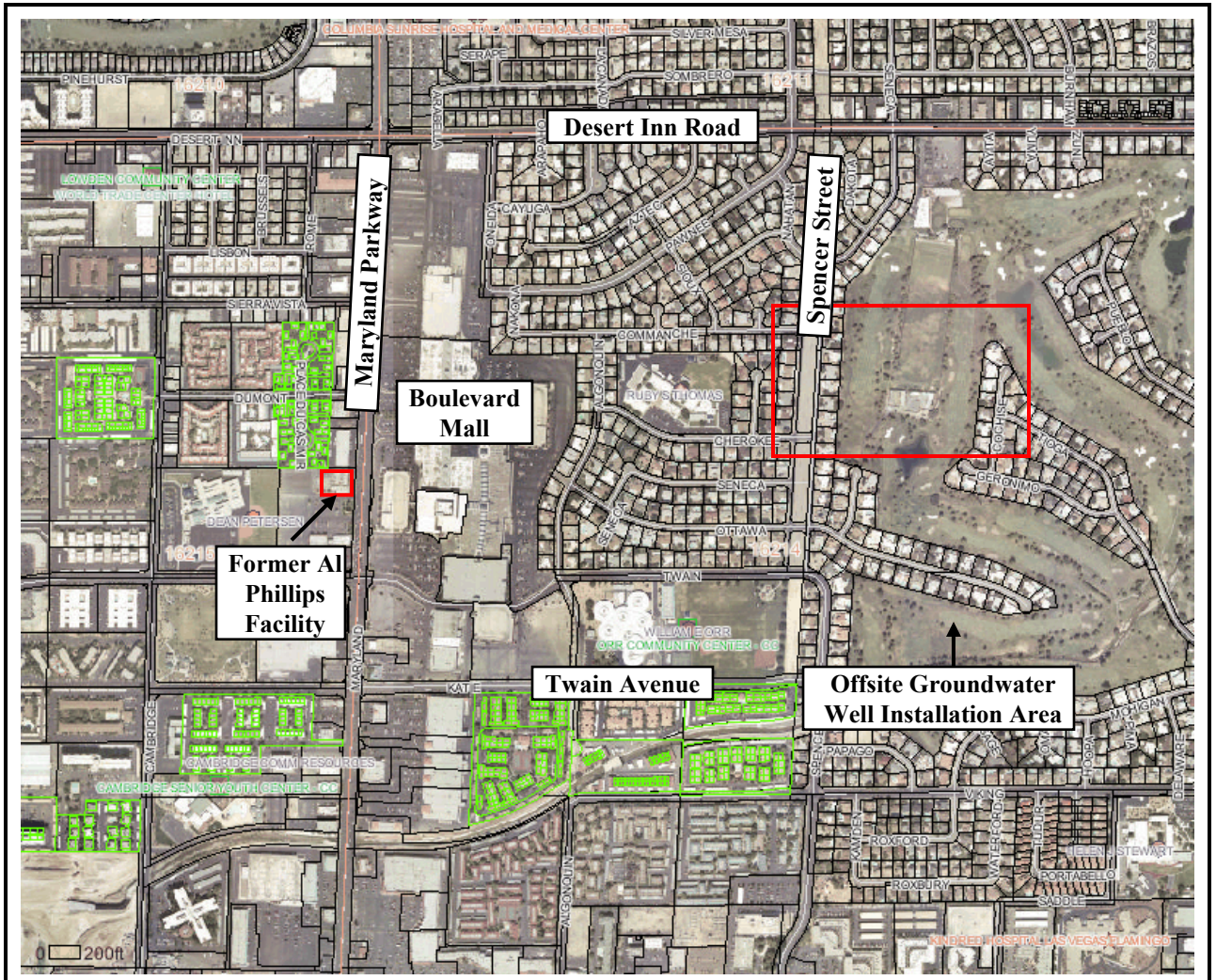
Sincerely,  
**URS Corporation**

Lisa B. Lowe  
Project Manager

William F. Van Stone Jr.  
Branch Manager

Cc: Mr. Randall L. Jackson, NDCI  
Mr. Dennis P. Connair, URS





Source: Clark County Assessors Web Site

Scale:  200 feet



## SITE LOCATION MAP

Al Phillips The Cleaner  
Groundwater Monitoring Well Installation  
Maryland Square Shopping Center  
3661 South Maryland Parkway  
Las Vegas, Nevada





March 2008  
Job No. 26698724  
Well Installation Fig 1.ppt

FIGURE 1



Source: Clark County Assessors Web Site  
 Scale: 0Feet 500 Feet



- Legend:
-  Approximate Location of New Monitoring Wells with PCE Concentration from March 2008
  -  Approximate Location of Selected Existing Monitoring Wells; PCE Concentration from November/December 2007 Sampling Event

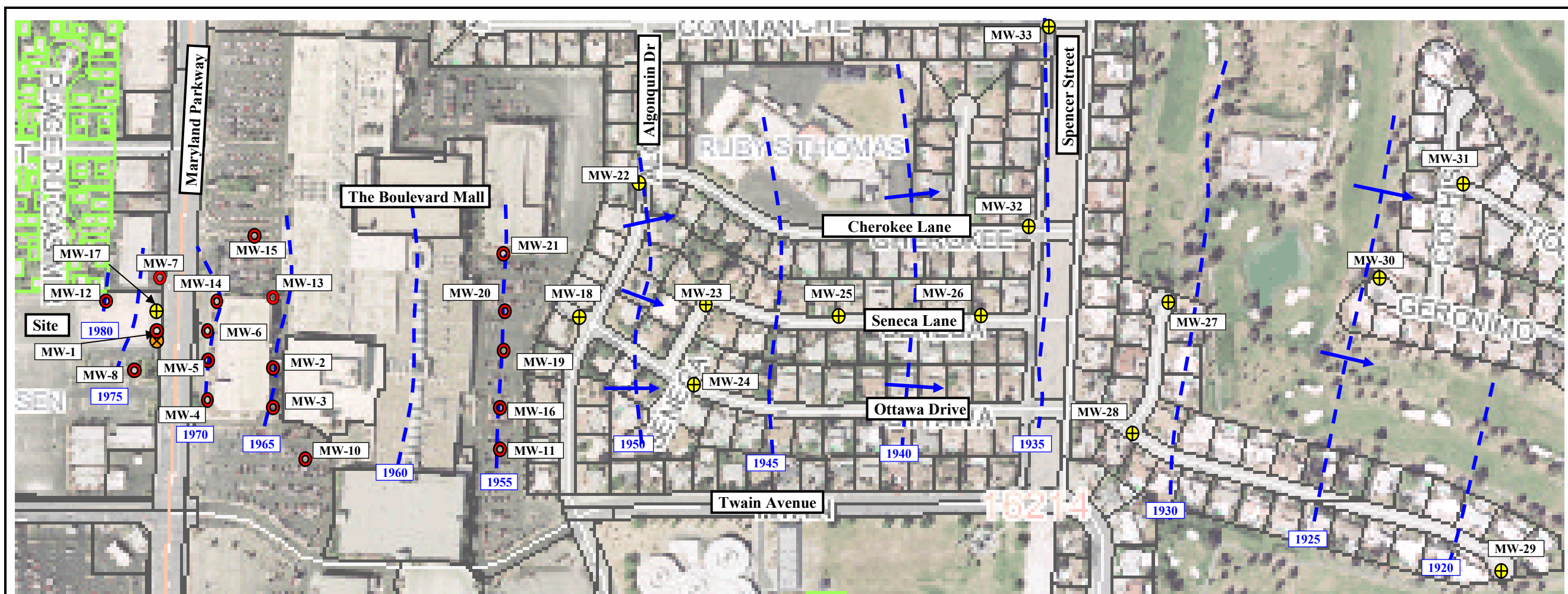
## MONITORING WELL LOCATIONS AND PCE CONCENTRATIONS

Al Phillips The Cleaner  
 Downgradient Groundwater Monitoring Well Installation  
 Maryland Square Shopping Center  
 3661 South Maryland Parkway  
 Las Vegas, Nevada

March 2008  
 Job No. 26698724  
 Well Installation Fig 2.ppt

FIGURE 2





Groundwater Elevations In Monitoring Wells (1st Quarter 2008)

Well	Elevation	Well	Elevation	Well	Elevation	Well	Elevation	Well	Elevation	Well	Elevation
MW-1	1972.01	MW-6	1968.75	MW-12	1979.99	MW-17	1971.41	MW-22	1949.59	MW-28	1931.36
MW-2	1965.15	MW-7	1972.32	MW-13	1965.89	MW-18	1951.72	MW-23	1947.14	MW-29	1918.50
MW-3	1964.49	MW-8	1973.62	MW-14	1969.26	MW-19	1954.91	MW-24	1947.76	MW-30	1924.24
MW-4	NM	MW-10	1962.74	MW-15	1966.66	MW-20	1954.87	MW-25	1942.87	MW-31	1922.70
MW-5	1969.87	MW-11	NM	MW-16	1954.30	MW-21	1955.37	MW-26	1937.57	MW-32	1935.57
								MW-27	1930.58	MW-33	1934.90

Elevations are feet above means sea level.

Source: Clark County Assessors Web Site  
Scale: 0 Feet 200 Feet

Legend:

- Approximate Location of Shallow Monitoring Well Installed by URS.
- Approximate Location of Intermediate Monitoring Well Installed by URS.
- Approximate Location of Monitoring Well Installed by Converse.
- Groundwater Elevation Contour Line.
- Approximate Direction of Groundwater Flow.

**URS**




## GROUNDWATER ELEVATION CONTOURS FOR SHALLOW WELLS

March 2008





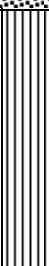
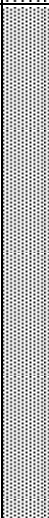
Al Phillips The Cleaner  
Groundwater Monitoring Well Installation  
Maryland Square Shopping Center  
3661 South Maryland Parkway  
Las Vegas, Nevada



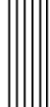


Job No. 26698724  
Well Install Fig 3.ppt



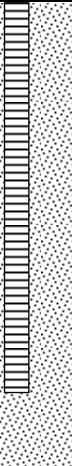
FIGURE 3







URS			BOREHOLE LOG MW-31							
Al Phillips The Cleaner Maryland Square Shopping Center Groundwater Monitoring Well Installation Las Vegas, Nevada Project No. 26698724					Date Started: Date Completed: Drilling Company: Drilling Method: Sampling Method: Logged By:		3/4/2008 3/5/2008 WDC Exploration Hollow Stem Auger None Lisa Lowe			
Depth In Feet	Time (0100 hrs)	Sample	Well Material Log	PID/FID (ppm)	Sample Number	USCS/Other	Graphic Log	SOIL DESCRIPTION	Well: MW-31 Elev.: 1937.93	Remarks/Well Information
0								0-4" ASPHALT		WELL CONSTRUCTION Date Compl.: 3/5/2008 Comp. Rep: L. Lowe
1						Af		4"-1.5' gravelly SAND: brown, sl. moist with up to 1.5" diameter angular rocks		
2								1.5'-9' silty SAND: tan, sl. moist, well sorted, fine grained, some plasticity with some pea gravel		SURFACE COMPLETION Type: Flush Mount Vault: Traffic Diameter: 12" Seal: Concrete Depth: 0'-2'
3								3'-4' same except lt. brown		
4								4'-9' silty SAND: tan, sl. moist, well sorted, fine grained, no plasticity		WELL CASING Material: PVC Diameter: 4" Depth: 0'-13.5' Joints: 3.5', 13.5'
5								6'-6.5' some caliche nodules		
6										WELL SCREEN Material: PVC Diameter: 4" Depth: 13.5'-33.5' Joints: 13.5', 23.5' Opening: 0.02" slotted Cap: expanding
7						SM		9'-13' silty SAND: lt. brown, sl. moist, well sorted, sl. plasticity with some pea gravel		
8										SAND FILTER PACK Type : Colorado Size: 812 Depth: 11'-45'
9								13'-22' silty SAND, lt. brown, moist, sl. plasticity, poorly sorted, fine grain with some pea gravel		
10										ANNULUS SEAL Bentonite Depth: 2'-11'
11								@16' same except sand more coarse		
12										REMARKS No sampling was performed Borehole was drilled and a Monitor well was installed.
13								@19' same except wet		
14										
15										
16										
17										
18										
19										
20										
21										
22								22'-30' gravelly SAND: lt. brown, wet, poorly sorted with some silt and pea gravel		
23						SW				
24										
25										








				<b>BOREHOLE LOG MW-31</b>								
Al Phillips The Cleaner Maryland Square Shopping Center Groundwater Monitoring Well Installation Las Vegas, Nevada Project No. 2698724				Date Started: Date Completed: Drilling Company: Drilling Method: Sampling Method: Logged By:		3/5/2008 3/6/2008 WDC Exploration Hollow Stem Auger None Lisa Lowe						
Depth In Feet	Time (0100 hrs)	Sample	Well Material Log	PID/FID (ppm)	Sample Number	USCS/Other	Graphic Log	SOIL DESCRIPTION	Well: MW-31 Elev.: 1937.93	Remarks/Well Information		
26						SW		22'-30' gravelly SAND: lt. brown, wet, poorly sorted with some silt and pea gravel				
27						ML		30'-35' sandy SILT: lt. brown, wet, stiff with some pea gravel				
28												
29												
30												
31												
32						CL		35'-45' gravelly CLAY: lt. brown, wet, stiff with some sand and silt				
33												
34												
35												
36												
37												
38												
39												
40												
41												
42												
43												
44												
45								Bottom of borehole @ 45 ft. bgs Groundwater encountered at Approximately 17 ft bgs.				
46								*Borehole drilled to 45 ft bgs due to gravelly SAND (22'-30') collapsing into borehole				
47												
48												
49												
50												
51												

URS			BOREHOLE LOG MW-32							
Al Phillips The Cleaner Maryland Square Shopping Center Groundwater Monitoring Well Installation Las Vegas, Nevada Project No. 26698724					Date Started: Date Completed: Drilling Company: Drilling Method: Sampling Method: Logged By:		3/4/2008 3/4/2008 WDC Exploration Hollow Stem Auger None Holly Woodward/Lisa Lowe			
Depth In Feet	Time (0100 hrs)	Sample	Well Material Log	PID/FID (ppm)	Sample Number	USCS/Other	Graphic Log	SOIL DESCRIPTION	Well: MW-32 Elev.: 1952.82	Remarks/Well Information
0								0-4.5" ASPHALT		WELL CONSTRUCTION Date Compl.: 3/4/2008 Comp. Rep: L. Lowe
1						Af		@ 4.5" to 3' silty SAND: fine-grained, lt. brown, sl. moist, med. dense, poorly graded w. sl. plasticity, some pea gravel, artificial fill		
2								3'-6' sandy SILT: lt. brown, sl. moist		SURFACE COMPLETION Type: Flush Mount Vault: Traffic Diameter: 12" Seal: Concrete Depth: 0'-2'
3						ML				
4								6'-15' silty SAND: brown, sl. moist, poorly graded, some gravel		WELL CASING Material: PVC Diameter: 4" Depth: 0' to 13.5' Joints: 3.5', 13.5'
5										
6										
7										
8								15'-25' CLAY: brown, sl. moist, med. dense, poorly graded, some sand and gravel		WELL SCREEN Material: PVC Diameter: 4" Depth: 13.5' to 33.5' Joints: 13.5', 23.5' Opening: 0.02" slotted Cap: expanding
9										
10						SM				
11										
12								@ 17.5' same as above but very moist		SAND FILTER PACK Type : Colorado Size: 812 Depth: 11'-35'
13										
14										
15										
16								25'-31' clayey SILT, lt. brown, wet, stiff		ANNULUS SEAL Bentonite Depth: 2'-11'
17										
18										
19										
20										REMARKS No sampling was performed Borehole was drilled and a Monitor well was installed.  *0' to 25' was logged during The drilling of B-T on 10/24/2007 by Holly Woodward
21										
22										
23										
24										
25						ML				

					<h2 style="text-align: center;">BOREHOLE LOG MW-32</h2>					
Al Phillips The Cleaner Maryland Square Shopping Center Groundwater Monitoring Well Installation Las Vegas, Nevada Project No. 2698724					Date Started: 3/4/2008 Date Completed: 3/4/2008 Drilling Company: WDC Exploration Drilling Method: Hollow Stem Auger Sampling Method: None Logged By: Holly Woodward/Lisa Lowe					
Depth In Feet	Time (0100 hrs)	Sample	Well Material Log	PID/FID (ppm)	Sample Number	USCS/Other	Graphic Log	SOIL DESCRIPTION	Well: MW-32 Elev.: 1952.82	Remarks/Well Information
26						ML		25'-31' clayey SILT, lt. brown, wet, stiff		
27										
28										
29										
30										
31										
32										
33										
34										
35								Bottom of borehole @ 35 ft. bgs Groundwater encountered at Approximately 17.5 feet bgs.		
36										
37										
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51										

			BOREHOLE LOG MW-33							
Al Phillips The Cleaner Maryland Square Shopping Center Groundwater Monitoring Well Installation Las Vegas, Nevada Project No. 26698724			Date Started: Date Completed: Drilling Company: Drilling Method: Sampling Method: Logged By:	3/5/2008 3/6/2008 WDC Exploration Hollow Stem Auger None Lisa Lowe						
Depth In Feet	Time (0100 hrs)	Sample	Well Material Log	PID/FID (ppm)	Sample Number	USCS/Other	Graphic Log	SOIL DESCRIPTION	Well: MW-33 Elev.: 1950.92	Remarks/Well Information
0						Af		0-4" ASPHALT		<b>WELL CONSTRUCTION</b> Date Compl.: 3/6/2008 Comp. Rep: L. Lowe
1								4"-2' SAND, lt. brown, st. moist, poorly sorted with up to 1" diameter angular Rocks, Artificial Fill		
2						SM		2'-5' silty SAND: lt. brown, sl. moist, well sorted with up to 1.5" long gypsum crystals		<b>SURFACE COMPLETION</b> Type: Flush Mount Vault: Traffic Diameter: 12" Seal: Concrete Depth: 0'-2'
3										
4										<b>WELL CASING</b> Material: PVC Diameter: 4" Depth: 0'-13.5' Joints: 3.5', 13.5'
5								5'-9' sandy SILT: brown, sl moist, stiff with some pea gravel		
6										<b>WELL SCREEN</b> Material: PVC Diameter: 4" Depth: 13.5' to 33.5' Joints: 13.5', 23.5' Opening: 0.02" slotted Cap: expanding
7										
8										<b>SAND FILTER PACK</b> Type : Colorado Size: 812 Depth: 11'-35'
9								9'-16' gravelly SILT: brown sl. moist, stiff with some fine grain sand		
10										<b>ANNULUS SEAL</b> Bentonite Depth: 2'-11'
11										
12										<b>REMARKS</b> No sampling was performed Borehole was drilled and a Monitor well was installed.
13										
14						ML				
15										
16								16'-25' sandy SILT, brown, moist, stiff with some pea gravel		
17										
18										
19										
20										
21										
22										
23										
24										
25								25'-34' clayey SILT, lt. brown, wet, stiff		



					<h2 style="text-align: center;">BOREHOLE LOG MW-33</h2>					
Al Phillips The Cleaner Maryland Square Shopping Center Groundwater Monitoring Well Installation Las Vegas, Nevada Project No. 2698724					Date Started: 3/5/2008 Date Completed: 3/6/2008 Drilling Company: WDC Exploration Drilling Method: Hollow Stem Auger Sampling Method: None Logged By: Lisa Lowe					
Depth In Feet	Time (0100 hrs)	Sample	Well Material Log	PID/FID (ppm)	Sample Number	USCS/Other	Graphic Log	SOIL DESCRIPTION	Well: MW-33 Elev.: 1950.92	Remarks/Well Information
26						ML		25'-34' clayey SILT, lt. brown, wet, stiff		
27										
28										
29										
30										
31										
32										
33										
34								34'-35' silty CLAY: white, moist, stiff		
35								Bottom of borehole @ 35 ft. bgs Groundwater encountered at Approximately 16.5' bgs.		
36										
37										
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49										
50										
51										



Date Started:	3/4/2008
Date Completed:	3/5/2008
Drilling Company:	WDC Explorations
Drilling Method:	Hollow-Stem Auger
Sampling Method:	Grab/Dedicated Bailor
Logged By:	Lisa Lowe



- 7 -











6245 Harrison Drive, Suite 4, Las Vegas, NV 89120

(702) 321-8315 Phone

(702) 597-2098 Fax

E-mail: veritaslabs@msn.com

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CLIENT NAME: URS Corporation  
811 Grier Dr.  
Las Vegas, NV 89119

PROJECT MGR: Lisa Lowe

CLIENT PROJECT NAME: **Al Phillips-Maryland Square**  
CLIENT PROJECT NUMBER: 26698724.00005

VERITAS ORDER ID: V0803005  
DATE RECEIVED AT LAB: 03/04/08

Presented herein are the analytical results for samples received from the above referenced project.

Samples submitted for this project were not sampled by Veritas Laboratories. Unless otherwise noted, samples were received by Veritas Laboratories under a chain of custody in good condition, properly preserved, and within hold time for the requested analyses.

*All laboratory analytical data presented herein was generated by a laboratory certified by the Nevada Division of Environmental Protection for each constituent and media reported for which a certification is required and offered.*

Should you have any questions or comments, please feel free to contact me at (702) 321-8315.

**General Comments:**

None

**Some Sample and/or QA results have been flagged as follows:**

None

03/04/08

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Bruce G. Cunningham  
Veritas Laboratories  
Nevada Lab ID NV00918

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Date

CLIENT NAME: URS Corporation  
CLIENT PROJECT NAME: **AI Phillips-Maryland Square**  
CLIENT PROJECT NUMBER: 26698724.00005

CLIENT SAMPLE ID: **B-T2**  
DATE SAMPLED: 03/04/08  
VERITAS SAMPLE ID: V0803005-01

**METHOD: Volatile Organic Compounds by EPA 8260B, GC/MS**

MATRIX: Groundwater

DATE(S) ANALYZED: 03/04/08

PARAMETER	RESULT µg/L	RL (PQL) µg/L	DF	PARAMETER	RESULT µg/L	RL (PQL) µg/L	DF
Benzene	ND	25	5	Ethylbenzene	ND	25	5
Bromobenzene	ND	25	5	Hexachlorobutadiene	ND	25	5
Bromodichloromethane	ND	25	5	Isopropylbenzene	ND	25	5
Bromoform	ND	25	5	4-Isopropyltoluene	ND	25	5
Bromomethane	ND	25	5	Methylene chloride (DCM)	ND	25	5
n-Butylbenzene	ND	25	5	Naphthalene	ND	25	5
sec-Butylbenzene	ND	25	5	n-Propylbenzene	ND	25	5
tert-Butylbenzene	ND	25	5	Styrene	ND	25	5
Carbon tetrachloride	ND	25	5	1,1,1,2-Tetrachloroethane	ND	25	5
Chlorobenzene	ND	25	5	1,1,2,2-Tetrachloroethane	ND	25	5
Chloroethane	ND	25	5	<b>Tetrachloroethene (PCE)</b>	<b>130</b>	<b>25</b>	<b>5</b>
Chloroform	ND	25	5	Toluene	ND	25	5
Chloromethane	ND	25	5	1,2,3-Trichlorobenzene	ND	25	5
2-Chlorotoluene	ND	25	5	1,2,4-Trichlorobenzene	ND	25	5
4-Chlorotoluene	ND	25	5	1,1,1-Trichloroethane (1,1,1-TCA)	ND	25	5
1,2-Dibromo-3-chloropropane (DBCP)	ND	25	5	1,1,2-Trichloroethane (1,1,2-TCA)	ND	25	5
Dibromochloromethane	ND	25	5	Trichloroethene (TCE)	ND	25	5
1,2-Dibromoethane (EDB)	ND	25	5	Trichlorofluoromethane (Freon11)	ND	25	5
Dibromomethane	ND	25	5	1,2,3-Trichloropropane	ND	25	5
1,2-Dichlorobenzene (o-DCB)	ND	25	5	1,2,4-Trimethylbenzene	ND	25	5
1,3-Dichlorobenzene (m-DCB)	ND	25	5	1,3,5-Trimethylbenzene	ND	25	5
1,4-Dichlorobenzene (p-DCB)	ND	25	5	Vinyl chloride	ND	25	5
Dichlorodifluoromethane (Freon 12)	ND	25	5	m,p-Xylene	ND	25	5
1,1-Dichloroethane (1,1-DCA)	ND	25	5	o-Xylene	ND	25	5
1,2-Dichloroethane (1,2-DCA)	ND	25	5	MTBE	ND	25	5
1,1-Dichloroethene (1,1-DCE)	ND	25	5				
cis-1,2-Dichloroethene	ND	25	5				
trans-1,2-Dichloroethene	ND	25	5				
1,2-Dichloropropane	ND	25	5				
1,3-Dichloropropane	ND	25	5				
2,2-Dichloropropane	ND	25	5				
1,1-Dichloropropene	ND	25	5				

**QUALITY CONTROL DATA:**

Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	90	70-130%
1,2-Dichloroethane-d4	81	70-130%
Toluene-d8	93	70-130%
4-Bromofluorobenzene	78	70-130%

RL-Reporting Limit (Practical Quantitation Limit)

DF-Dilution Factor

ND - Not Detected at Indicated Reporting Limit (PQL).

CLIENT NAME: URS Corporation  
CLIENT PROJECT NAME: Al Phillips-Maryland Square  
CLIENT PROJECT NUMBER: 26698724.00005

CLIENT SAMPLE ID: METHOD BLANK  
DATE SAMPLED: NA  
VERITAS SAMPLE ID: VBLK080304-02

**METHOD: Volatile Organic Compounds by EPA 8260B, GC/MS**

MATRIX: Groundwater

DATE(S) ANALYZED: 03/04/08

PARAMETER	RESULT µg/L	RL (PQL) µg/L	DF	PARAMETER	RESULT µg/L	RL (PQL) µg/L	DF
Benzene	ND	5.0	1	Ethylbenzene	ND	5.0	1
Bromobenzene	ND	5.0	1	Hexachlorobutadiene	ND	5.0	1
Bromodichloromethane	ND	5.0	1	Isopropylbenzene	ND	5.0	1
Bromoform	ND	5.0	1	4-Isopropyltoluene	ND	5.0	1
Bromomethane	ND	5.0	1	Methylene chloride (DCM)	ND	5.0	1
n-Butylbenzene	ND	5.0	1	Naphthalene	ND	5.0	1
sec-Butylbenzene	ND	5.0	1	n-Propylbenzene	ND	5.0	1
tert-Butylbenzene	ND	5.0	1	Styrene	ND	5.0	1
Carbon tetrachloride	ND	5.0	1	1,1,1,2-Tetrachloroethane	ND	5.0	1
Chlorobenzene	ND	5.0	1	1,1,2,2-Tetrachloroethane	ND	5.0	1
Chloroethane	ND	5.0	1	Tetrachloroethene (PCE)	ND	5.0	1
Chloroform	ND	5.0	1	Toluene	ND	5.0	1
Chloromethane	ND	5.0	1	1,2,3-Trichlorobenzene	ND	5.0	1
2-Chlorotoluene	ND	5.0	1	1,2,4-Trichlorobenzene	ND	5.0	1
4-Chlorotoluene	ND	5.0	1	1,1,1-Trichloroethane (1,1,1-TCA)	ND	5.0	1
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	1	1,1,2-Trichloroethane (1,1,2-TCA)	ND	5.0	1
Dibromochloromethane	ND	5.0	1	Trichloroethene (TCE)	ND	5.0	1
1,2-Dibromoethane (EDB)	ND	5.0	1	Trichlorofluoromethane (Freon11)	ND	5.0	1
Dibromomethane	ND	5.0	1	1,2,3-Trichloropropane	ND	5.0	1
1,2-Dichlorobenzene (o-DCB)	ND	5.0	1	1,2,4-Trimethylbenzene	ND	5.0	1
1,3-Dichlorobenzene (m-DCB)	ND	5.0	1	1,3,5-Trimethylbenzene	ND	5.0	1
1,4-Dichlorobenzene (p-DCB)	ND	5.0	1	Vinyl chloride	ND	5.0	1
Dichlorodifluoromethane (Freon 12)	ND	5.0	1	m,p-Xylene	ND	5.0	1
1,1-Dichloroethane (1,1-DCA)	ND	5.0	1	o-Xylene	ND	5.0	1
1,2-Dichloroethane (1,2-DCA)	ND	5.0	1	MTBE	ND	5.0	1
1,1-Dichloroethene (1,1-DCE)	ND	5.0	1				
cis-1,2-Dichloroethene	ND	5.0	1				
trans-1,2-Dichloroethene	ND	5.0	1				
1,2-Dichloropropane	ND	5.0	1				
1,3-Dichloropropane	ND	5.0	1				
2,2-Dichloropropane	ND	5.0	1				
1,1-Dichloropropene	ND	5.0	1				

**QUALITY CONTROL DATA:**

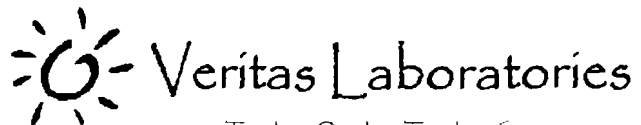
Surrogate	% Recovery	Acceptable Range
Dibromofluoromethane	102	70-130%
1,2-Dichloroethane-d4	90	70-130%
Toluene-d8	105	70-130%
4-Bromofluorobenzene	76	70-130%

RL-Reporting Limit (Practical Quantitation Limit)

DF-Dilution Factor

ND - Not Detected at Indicated Reporting Limit (PQL).





6245 Harrison Drive, Suite 4, Las Vegas, NV 89120

(702) 321-8315 Phone

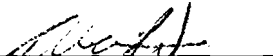

(702) 597-2098 Fax

F\_mail: [veritaslabs@msn.com](mailto:veritaslabs@msn.com)

Veritas Lab ID:

V 080,3005

Company: URS	Telephone: 556-2750
Address: 811 Grider Dr Las Vegas, NV 89119	Fax: 492-9149
	Email: Lisa.Lowe@URS Corp.com
Attention: Lisa Lowe	Project Name/Project Number:
Invoice To: "	At Phillips-Maryland Square / 26695724.0005
Sampled By: "	P.O. Number:

Client Sample ID	Veritas Lab ID	Date Sampled	Time Sampled	Com-posite	Grab	Matrix Code <sup>1</sup>	820													Comments
B-T2		3-4-08	1210		X	GW	X													
Relinquished by: (Signature)	Date/Time:	Turnaround Time:		Matrix Code		Preservation Code				Container Code				For Lab Use Only						
	3-4-08/12:59	<div><input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 5 Days (Normal) <input type="checkbox"/> Other</div>		GW=Groundwater WW=Wastewater DW=Drinking Water A=Air S=Soil/Solid SL=Sludge OL=Organic Liquid W=Wipe O=Other		I=Iced H=HCL N=HNO <sub>3</sub> S=H <sub>2</sub> SO <sub>4</sub> X=NaOH T=Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Z=ZnAc O=Other NO=None				A=Amber G=Glass P=Plastic ST=Sterile V=VOA Vial T=Tedlar Bag W=Wipe O=Other				Received in Good Condition? <div><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</div> Custody Seals? <div><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</div> Temperature 4°C						
Received by: (Signature)	Date/Time:																			
	3/4/08 1pm																			
Relinquished by: (Signature)	Date/Time:																			
Received by: (Signature)	Date/Time:	3/5/08 Date Needed																		

*By Signing this Chain of Custody, the Client Agrees to All of Veritas Laboratories' Published Standard Terms and Conditions*

## CHAIN OF CUSTODY

***All Data Reported on a Wet-Weight Basis, Unless Otherwise Specified***

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

URS Corporation  
811 Grier Dr.  
Las Vegas, NV 89119  
Job#: 26698724

Attn: Lisa Lowe  
Phone: (702) 492-7923  
Fax: (702) 837-1600

Alpha Analytical Number: URS08031801-01A  
Client I.D. Number: MW-33

Sampled: 03/17/08  
Received: 03/18/08  
Analyzed: 03/19/08

### Volatile Organics by GC/MS EPA Method SW8260B

Reporting			Reporting		
Compound	Concentration	Limit	Compound	Concentration	Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	45 2-Chlorotoluene	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	46 1,3,5-Trimethylbenzene	ND	1.0 µg/L
3 Vinyl chloride	ND	1.0 µg/L	47 tert-Butylbenzene	ND	1.0 µg/L
4 Chloroethane	ND	1.0 µg/L	48 1,2,4-Trimethylbenzene	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	49 sec-Butylbenzene	ND	1.0 µg/L
6 Trichlorofluoromethane	ND	1.0 µg/L	50 1,3-Dichlorobenzene	ND	1.0 µg/L
7 1,1-Dichloroethene	ND	1.0 µg/L	51 1,4-Dichlorobenzene	ND	1.0 µg/L
8 Dichloromethane	ND	2.0 µg/L	52 4-Isopropyltoluene	ND	1.0 µg/L
9 trans-1,2-Dichloroethene	ND	1.0 µg/L	53 1,2-Dichlorobenzene	ND	1.0 µg/L
10 1,1-Dichloroethane	ND	1.0 µg/L	54 n-Butylbenzene	ND	1.0 µg/L
11 cis-1,2-Dichloroethene	ND	1.0 µg/L	55 1,2-Dibromo-3-chloropropane (DBCP)	ND	3.0 µg/L
12 Bromochloromethane	ND	1.0 µg/L	56 1,2,4-Trichlorobenzene	ND	2.0 µg/L
13 Chloroform	5.6	1.0 µg/L	57 Naphthalene	ND	2.0 µg/L
14 2,2-Dichloropropane	ND	1.0 µg/L	58 Hexachlorobutadiene	ND	2.0 µg/L
15 1,2-Dichloroethane	ND	1.0 µg/L	59 1,2,3-Trichlorobenzene	ND	2.0 µg/L
16 1,1,1-Trichloroethane	ND	1.0 µg/L	60 Surr: 1,2-Dichloroethane-d4	98	(75-128) %REC
17 1,1-Dichloropropene	ND	1.0 µg/L	61 Surr: Toluene-d8	102	(80-120) %REC
18 Carbon tetrachloride	ND	1.0 µg/L	62 Surr: 4-Bromofluorobenzene	104	(80-120) %REC
19 Benzene	ND	1.0 µg/L			
20 Dibromomethane	ND	1.0 µg/L			
21 1,2-Dichloropropane	ND	1.0 µg/L			
22 Trichloroethene	ND	1.0 µg/L			
23 Bromodichloromethane	ND	1.0 µg/L			
24 cis-1,3-Dichloropropene	ND	1.0 µg/L			
25 trans-1,3-Dichloropropene	ND	1.0 µg/L			
26 1,1,2-Trichloroethane	ND	1.0 µg/L			
27 Toluene	ND	1.0 µg/L			
28 1,3-Dichloropropane	ND	1.0 µg/L			
29 Dibromochloromethane	ND	1.0 µg/L			
30 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
31 Tetrachloroethene	2.4	1.0 µg/L			
32 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			
33 Chlorobenzene	ND	1.0 µg/L			
34 Ethylbenzene	ND	1.0 µg/L			
35 m,p-Xylene	ND	1.0 µg/L			
36 Bromoform	ND	1.0 µg/L			
37 Styrene	ND	1.0 µg/L			
38 o-Xylene	ND	1.0 µg/L			
39 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L			
40 1,2,3-Trichloropropane	ND	2.0 µg/L			
41 Isopropylbenzene	ND	1.0 µg/L			
42 Bromobenzene	ND	1.0 µg/L			
43 n-Propylbenzene	ND	1.0 µg/L			
44 4-Chlorotoluene	ND	1.0 µg/L			

ND = Not Detected

*Roger Scholl*

*Randy Gardner*

*Walter Hinchman*

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV16.

*PS*  
3/19/08

Report Date



# *Alpha Analytical, Inc.*

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

---

## **VOC Sample Preservation Report**

---

**Work Order:** URS08031801

**Project:** 26698724

---

Alpha's Sample ID	Client's Sample ID	Matrix	pH
08031801-01A	MW-33	Aqueous	2

---

**3/19/08**

**Report Date**



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

19-Mar-08

## OC Summary Report

Work Order:

08031801

### Method Blank

Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **08031841.D**

Batch ID: **MS15W0318A**

Analysis Date: **03/18/2008 23:00**

Sample ID: **MBLK MS15W0318A**

Units : **µg/L**

Run ID: **MSD\_15\_080318C**

Prep Date: **03/18/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	1								
Chloromethane	ND	2								
Vinyl chloride	ND	1								
Chloroethane	ND	1								
Bromomethane	ND	2								
Trichlorofluoromethane	ND	1								
1,1-Dichloroethene	ND	1								
Dichloromethane	ND	2								
trans-1,2-Dichloroethene	ND	1								
1,1-Dichloroethane	ND	1								
cis-1,2-Dichloroethene	ND	1								
Bromochloromethane	ND	1								
Chloroform	ND	1								
2,2-Dichloropropane	ND	1								
1,2-Dichloroethane	ND	1								
1,1,1-Trichloroethane	ND	1								
1,1-Dichloropropene	ND	1								
Carbon tetrachloride	ND	1								
Benzene	ND	1								
Dibromomethane	ND	1								
1,2-Dichloropropane	ND	1								
Trichloroethene	ND	1								
Bromodichloromethane	ND	1								
cis-1,3-Dichloropropene	ND	1								
trans-1,3-Dichloropropene	ND	1								
1,1,2-Trichloroethane	ND	1								
Toluene	ND	1								
1,3-Dichloropropane	ND	1								
Dibromochloromethane	ND	1								
1,2-Dibromoethane (EDB)	ND	2								
Tetrachloroethene	ND	1								
1,1,1,2-Tetrachloroethane	ND	1								
Chlorobenzene	ND	1								
Ethylbenzene	ND	1								
m,p-Xylene	ND	1								
Bromoform	ND	1								
Styrene	ND	1								
o-Xylene	ND	1								
1,1,2,2-Tetrachloroethane	ND	1								
1,2,3-Trichloropropane	ND	2								
Isopropylbenzene	ND	1								
Bromobenzene	ND	1								
n-Propylbenzene	ND	1								
4-Chlorotoluene	ND	1								
2-Chlorotoluene	ND	1								
1,3,5-Trimethylbenzene	ND	1								
tert-Butylbenzene	ND	1								
1,2,4-Trimethylbenzene	ND	1								
sec-Butylbenzene	ND	1								
1,3-Dichlorobenzene	ND	1								
1,4-Dichlorobenzene	ND	1								
4-Isopropyltoluene	ND	1								
1,2-Dichlorobenzene	ND	1								
n-Butylbenzene	ND	1								
1,2-Dibromo-3-chloropropane (DBCP)	ND	3								
1,2,4-Trichlorobenzene	ND	2								
Naphthalene	ND	2								
Hexachlorobutadiene	ND	2								
1,2,3-Trichlorobenzene	ND	2								
Surr: 1,2-Dichloroethane-d4	10		10		100	75	128			
Surr: Toluene-d8	10.7		10		107	80	120			
Surr: 4-Bromofluorobenzene	10.3		10		103	80	120			



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:

19-Mar-08

## OC Summary Report

Work Order:

08031801

### Laboratory Control Spike

File ID: 08031838.D

Type LCS

Test Code: EPA Method SW8260B

Batch ID: MS15W0318A

Analysis Date: 03/18/2008 21:51

Sample ID: LCS MS15W0318A

Units : µg/L

Run ID: MSD\_15\_080318C

Prep Date: 03/18/2008

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	10.2	1	10		102	80	120			
Benzene	10.8	0.5	10		108	70	130			
Trichloroethene	10.6	1	10		106	70	130			
Toluene	10.1	0.5	10		101	80	120			
Chlorobenzene	10.2	1	10		102	70	130			
Ethylbenzene	10.5	0.5	10		105	80	120			
m,p-Xylene	11.3	0.5	10		113	70	130			
o-Xylene	11.6	0.5	10		116	70	130			
Surr: 1,2-Dichloroethane-d4	9.14		10		91	75	128			
Surr: Toluene-d8	9.94		10		99	80	120			
Surr: 4-Bromofluorobenzene	10.7		10		107	80	120			

### Sample Matrix Spike

File ID: 08031842.D

Type MS

Test Code: EPA Method SW8260B

Batch ID: MS15W0318A

Analysis Date: 03/18/2008 23:23

Sample ID: 08031747-02AMS

Units : µg/L

Run ID: MSD\_15\_080318C

Prep Date: 03/18/2008

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	43.4	2.5	50		87	66	132			
Benzene	46.9	1.3	50		94	70	130			
Trichloroethene	44.5	2.5	50		89	69	130			
Toluene	42.3	1.3	50		85	67	130			
Chlorobenzene	43.7	2.5	50		87	70	130			
Ethylbenzene	43.9	1.3	50		88	70	130			
m,p-Xylene	47.1	1.3	50		94	69	130			
o-Xylene	49.3	1.3	50		99	70	130			
Surr: 1,2-Dichloroethane-d4	46.6		50		93	75	128			
Surr: Toluene-d8	48.3		50		97	80	120			
Surr: 4-Bromofluorobenzene	52.9		50		106	80	120			

### Sample Matrix Spike Duplicate

File ID: 08031843.D

Type MSD

Test Code: EPA Method SW8260B

Batch ID: MS15W0318A

Analysis Date: 03/18/2008 23:46

Sample ID: 08031747-02AMSD

Units : µg/L

Run ID: MSD\_15\_080318C

Prep Date: 03/18/2008

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	38.2	2.5	50		76	66	132	43.42	12.7(20)	
Benzene	43.8	1.3	50		88	70	130	46.86	6.9(20)	
Trichloroethene	40.1	2.5	50		80	69	130	44.5	10.5(20)	
Toluene	40.1	1.3	50		80	67	130	42.32	5.3(20)	
Chlorobenzene	42	2.5	50		84	70	130	43.72	4.1(20)	
Ethylbenzene	40.8	1.3	50		82	70	130	43.85	7.1(20)	
m,p-Xylene	43.9	1.3	50		88	69	130	47.13	7.1(20)	
o-Xylene	47.1	1.3	50		94	70	130	49.25	4.6(20)	
Surr: 1,2-Dichloroethane-d4	45		50		90	75	128			
Surr: Toluene-d8	49.3		50		99	80	120			
Surr: 4-Bromofluorobenzene	53.4		50		107	80	120			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

**Billing Information :**

# CHAIN-OF-CUSTODY RECORD

**NV RUSH!**  
Page 1 of 1

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

**WorkOrder : URSL08031801**  
**Report Due By : 5:00 PM On : 19-Mar-08**

**Client:**

URS Corporation  
811 Grier Dr.

**Report Attention**

Lisa Lowe (702) 492-7923 x lisa\_lowe@urscorp.com

**Phone Number**

**Email Address**

EDD Required : No

Sampled by : Client

Cooler Temp

4 °C

Samples Received

18-Mar-08

Date Printed

18-Mar-08

Las Vegas, NV 89119

PO :

Client's COC # : 22665

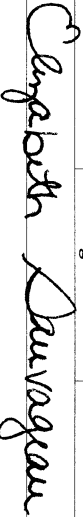
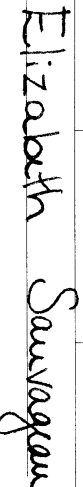
Job : 26698724

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD with Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles			Requested Tests								Sample Remarks	
			Alpha	Sub	TAT	VOC_w									
URS08031801-01A	MW-33	AQ 03/17/08 14:11	3	0	1	8260_N									

**Comments:**

Security seals intact. Frozen ice. Chain split into two separate work orders due to different TATs. 24 Hour TAT.:

<b>Logged in by:</b>		<b>Signature</b>		<b>Print Name</b>	<b>Company</b>	<b>Date/Time</b>
					Alpha Analytical, Inc.	3-18-08 9:59

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other



Name UKS Corporation

Address 811 Grier Drive  
City, State, Zip Las Vegas, NV 89119  
Phone Number 702-492-7423 Fax 702-492-9149



**Samples Collected From Which State?**








2265

AZ	CA	NY	WA
ID	OR	OTHER	

Page # 1 of 1

Client Name				P.O. #	Job #	Analyses Required			
Address				Email Address		Required QC Level?			
City, State, Zip				Phone #	Fax #	I	II	III	IV
Time Sampled	Date Sampled	Matrix* See Key Below	Sampled by	Report Attention					
			Lab ID Number (Use Only)	Sample Description	TAT	Field Filtered	Total and type of containers ** See below		
1411	3/7/02	AA	URS08031801-01	MW-33	48hr	N	3V	X	
1510				MW-32	Norm				
1612				MW-31	Norm				
REMARKS									
Global ID #									
EDD / EDF? YES NO									
Global ID #									

**ADDITIONAL INSTRUCTIONS:**

Signature	Print Name	Company	Date	Time
Relinquished by 	Lisa B. Love	URS	3/17/08	1642
Received by 	V. Smith		3-17-08	1642
Relinquished by 	V. Smith		3-17-08	1642
Received by 	E. Savaragan		3-18-08	9:59
Relinquished by				
Received by				
Relinquished by				
Received by				

*Key: AQ - Aqueous	SO - Soil	WA - Waste	OT - Other	AR - Air	** : L-Lier	V-Voa	S-Soil Jar	O-Orbo	T-Tedlar	B-Brass	P-Plastic	OT-Other
<b>NOTE:</b> Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this coc. The liability of the laboratory is limited to the amount paid for the report.												



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

URS Corporation  
811 Grier Dr.  
Las Vegas, NV 89119  
Job#: 26698724

Attn: Lisa Lowe  
Phone: (702) 492-7923  
Fax: (702) 837-1600

Alpha Analytical Number: URS08031803-01A  
Client I.D. Number: MW-32

Sampled: 03/17/08  
Received: 03/18/08  
Analyzed: 03/20/08

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	10 µg/L	36 Bromoform	ND	10 µg/L
2 Chloromethane	ND	40 µg/L	37 Styrene	ND	10 µg/L
3 Vinyl chloride	ND	10 µg/L	38 o-Xylene	ND	5.0 µg/L
4 Chloroethane	ND	10 µg/L	39 1,1,2,2-Tetrachloroethane	ND	10 µg/L
5 Bromomethane	ND	40 µg/L	40 1,2,3-Trichloropropane	ND	40 µg/L
6 Trichlorofluoromethane	ND	10 µg/L	41 Isopropylbenzene	ND	10 µg/L
7 1,1-Dichloroethene	ND	10 µg/L	42 Bromobenzene	ND	10 µg/L
8 Dichloromethane	ND	40 µg/L	43 n-Propylbenzene	ND	10 µg/L
9 trans-1,2-Dichloroethene	ND	10 µg/L	44 4-Chlorotoluene	ND	10 µg/L
10 1,1-Dichloroethane	ND	10 µg/L	45 2-Chlorotoluene	ND	10 µg/L
11 cis-1,2-Dichloroethene	ND	10 µg/L	46 1,3,5-Trimethylbenzene	ND	10 µg/L
12 Bromochloromethane	ND	10 µg/L	47 tert-Butylbenzene	ND	10 µg/L
13 Chloroform	ND	10 µg/L	48 1,2,4-Trimethylbenzene	ND	10 µg/L
14 2,2-Dichloropropane	ND	10 µg/L	49 sec-Butylbenzene	ND	10 µg/L
15 1,2-Dichloroethane	ND	10 µg/L	50 1,3-Dichlorobenzene	ND	10 µg/L
16 1,1,1-Trichloroethane	ND	10 µg/L	51 1,4-Dichlorobenzene	ND	10 µg/L
17 1,1-Dichloropropene	ND	10 µg/L	52 4-Isopropyltoluene	ND	10 µg/L
18 Carbon tetrachloride	ND	10 µg/L	53 1,2-Dichlorobenzene	ND	10 µg/L
19 Benzene	ND	5.0 µg/L	54 n-Butylbenzene	ND	10 µg/L
20 Dibromomethane	ND	10 µg/L	55 1,2-Dibromo-3-chloropropane (DBCP)	ND	60 µg/L
21 1,2-Dichloropropane	ND	10 µg/L	56 1,2,4-Trichlorobenzene	ND	40 µg/L
22 Trichloroethene	ND	10 µg/L	57 Naphthalene	ND	40 µg/L
23 Bromodichloromethane	ND	10 µg/L	58 Hexachlorobutadiene	ND	40 µg/L
24 cis-1,3-Dichloropropene	ND	10 µg/L	59 1,2,3-Trichlorobenzene	ND	40 µg/L
25 trans-1,3-Dichloropropene	ND	10 µg/L	60 Surr: 1,2-Dichloroethane-d4	82	(75-128) %REC
26 1,1,2-Trichloroethane	ND	10 µg/L	61 Surr: Toluene-d8	99	(80-120) %REC
27 Toluene	ND	5.0 µg/L	62 Surr: 4-Bromofluorobenzene	92	(80-120) %REC
28 1,3-Dichloropropane	ND	10 µg/L			
29 Dibromochloromethane	ND	10 µg/L			
30 1,2-Dibromoethane (EDB)	ND	40 µg/L			
31 Tetrachloroethene	720	10 µg/L			
32 1,1,1,2-Tetrachloroethane	ND	10 µg/L			
33 Chlorobenzene	ND	10 µg/L			
34 Ethylbenzene	ND	5.0 µg/L			
35 m,p-Xylene	ND	5.0 µg/L			

Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

*Roger Scholl*

*Randy Gardner*

*Walter Hinchman*

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV16.

*PS*

3/24/08

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## ANALYTICAL REPORT

URS Corporation  
811 Grier Dr.  
Las Vegas, NV 89119  
Job#: 26698724

Attn: Lisa Lowe  
Phone: (702) 492-7923  
Fax: (702) 837-1600

Alpha Analytical Number: URS08031803-02A  
Client I.D. Number: MW-31

Sampled: 03/17/08  
Received: 03/18/08  
Analyzed: 03/20/08

### Volatile Organics by GC/MS EPA Method SW8260B

Compound	Concentration	Reporting Limit	Compound	Concentration	Reporting Limit
1 Dichlorodifluoromethane	ND	1.0 µg/L	36 Bromoform	ND	1.0 µg/L
2 Chloromethane	ND	2.0 µg/L	37 Styrene	ND	1.0 µg/L
3 Vinyl chloride	ND	1.0 µg/L	38 o-Xylene	ND	1.0 µg/L
4 Chloroethane	ND	1.0 µg/L	39 1,1,2,2-Tetrachloroethane	ND	1.0 µg/L
5 Bromomethane	ND	2.0 µg/L	40 1,2,3-Trichloropropane	ND	2.0 µg/L
6 Trichlorofluoromethane	ND	1.0 µg/L	41 Isopropylbenzene	ND	1.0 µg/L
7 1,1-Dichloroethene	ND	1.0 µg/L	42 Bromobenzene	ND	1.0 µg/L
8 Dichloromethane	ND	2.0 µg/L	43 n-Propylbenzene	ND	1.0 µg/L
9 trans-1,2-Dichloroethene	ND	1.0 µg/L	44 4-Chlorotoluene	ND	1.0 µg/L
10 1,1-Dichloroethane	ND	1.0 µg/L	45 2-Chlorotoluene	ND	1.0 µg/L
11 cis-1,2-Dichloroethene	ND	1.0 µg/L	46 1,3,5-Trimethylbenzene	ND	1.0 µg/L
12 Bromochloromethane	ND	1.0 µg/L	47 tert-Butylbenzene	ND	1.0 µg/L
13 Chloroform	2.9	1.0 µg/L	48 1,2,4-Trimethylbenzene	ND	1.0 µg/L
14 2,2-Dichloropropane	ND	1.0 µg/L	49 sec-Butylbenzene	ND	1.0 µg/L
15 1,2-Dichloroethane	ND	1.0 µg/L	50 1,3-Dichlorobenzene	ND	1.0 µg/L
16 1,1,1-Trichloroethane	ND	1.0 µg/L	51 1,4-Dichlorobenzene	ND	1.0 µg/L
17 1,1-Dichloropropene	ND	1.0 µg/L	52 4-Isopropyltoluene	ND	1.0 µg/L
18 Carbon tetrachloride	ND	1.0 µg/L	53 1,2-Dichlorobenzene	ND	1.0 µg/L
19 Benzene	ND	1.0 µg/L	54 n-Butylbenzene	ND	1.0 µg/L
20 Dibromomethane	ND	1.0 µg/L	55 1,2-Dibromo-3-chloropropane (DBCP)	ND	3.0 µg/L
21 1,2-Dichloropropane	ND	1.0 µg/L	56 1,2,4-Trichlorobenzene	ND	2.0 µg/L
22 Trichloroethene	ND	1.0 µg/L	57 Naphthalene	ND	2.0 µg/L
23 Bromodichloromethane	ND	1.0 µg/L	58 Hexachlorobutadiene	ND	2.0 µg/L
24 cis-1,3-Dichloropropene	ND	1.0 µg/L	59 1,2,3-Trichlorobenzene	ND	2.0 µg/L
25 trans-1,3-Dichloropropene	ND	1.0 µg/L	60 Surr: 1,2-Dichloroethane-d4	90	(75-128) %REC
26 1,1,2-Trichloroethane	ND	1.0 µg/L	61 Surr: Toluene-d8	101	(80-120) %REC
27 Toluene	ND	1.0 µg/L	62 Surr: 4-Bromofluorobenzene	93	(80-120) %REC
28 1,3-Dichloropropane	ND	1.0 µg/L			
29 Dibromochloromethane	ND	1.0 µg/L			
30 1,2-Dibromoethane (EDB)	ND	2.0 µg/L			
31 Tetrachloroethene	49	1.0 µg/L			
32 1,1,1,2-Tetrachloroethane	ND	1.0 µg/L			
33 Chlorobenzene	ND	1.0 µg/L			
34 Ethylbenzene	ND	1.0 µg/L			
35 m,p-Xylene	ND	1.0 µg/L			

ND = Not Detected

*Roger Scholl*

*Randy Gardner*

*Walter Hinchman*

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / info@alpha-analytical.com

Alpha Analytical, Inc. currently holds appropriate and available NDEP certifications for the data reported - certification #NV16.

*JS*

3/24/08

Report Date

Page 1 of 1



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778  
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

## VOC Sample Preservation Report

**Work Order:** URS08031803

**Project:** 26698724

Alpha's Sample ID	Client's Sample ID	Matrix	pH
08031803-01A	MW-32	Aqueous	2
08031803-02A	MW-31	Aqueous	2

3/24/08

Report Date



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
21-Mar-08

## OC Summary Report

Work Order:  
08031803

### Method Blank

Type **MBLK** Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS10\DATA\080319\08031935.D**

Batch ID: **MS10W0319C**

Analysis Date: **03/19/2008 20:45**

Sample ID: **MBLK MS10W0319C**

Units: **µg/L**

Run ID: **MSD\_10\_080319A**

Prep Date: **03/19/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Dichlorodifluoromethane	ND	1								
Chloromethane	ND	2								
Vinyl chloride	ND	1								
Chloroethane	ND	1								
Bromomethane	ND	2								
Trichlorofluoromethane	ND	1								
1,1-Dichloroethene	ND	1								
Dichloromethane	ND	2								
trans-1,2-Dichloroethene	ND	1								
1,1-Dichloroethane	ND	1								
cis-1,2-Dichloroethene	ND	1								
Bromochloromethane	ND	1								
Chloroform	ND	1								
2,2-Dichloropropane	ND	1								
1,2-Dichloroethane	ND	1								
1,1,1-Trichloroethane	ND	1								
1,1-Dichloropropene	ND	1								
Carbon tetrachloride	ND	1								
Benzene	ND	1								
Dibromomethane	ND	1								
1,2-Dichloropropane	ND	1								
Trichloroethene	ND	1								
Bromodichloromethane	ND	1								
cis-1,3-Dichloropropene	ND	1								
trans-1,3-Dichloropropene	ND	1								
1,1,2-Trichloroethane	ND	1								
Toluene	ND	1								
1,3-Dichloropropane	ND	1								
Dibromochloromethane	ND	1								
1,2-Dibromoethane (EDB)	ND	2								
Tetrachloroethene	ND	1								
1,1,1,2-Tetrachloroethane	ND	1								
Chlorobenzene	ND	1								
Ethylbenzene	ND	1								
m,p-Xylene	ND	1								
Bromoform	ND	1								
Styrene	ND	1								
o-Xylene	ND	1								
1,1,2,2-Tetrachloroethane	ND	1								
1,2,3-Trichloropropane	ND	2								
Isopropylbenzene	ND	1								
Bromobenzene	ND	1								
n-Propylbenzene	ND	1								
4-Chlorotoluene	ND	1								
2-Chlorotoluene	ND	1								
1,3,5-Trimethylbenzene	ND	1								
tert-Butylbenzene	ND	1								
1,2,4-Trimethylbenzene	ND	1								
sec-Butylbenzene	ND	1								
1,3-Dichlorobenzene	ND	1								
1,4-Dichlorobenzene	ND	1								
4-Isopropyltoluene	ND	1								
1,2-Dichlorobenzene	ND	1								
n-Butylbenzene	ND	1								
1,2-Dibromo-3-chloropropane (DBCP)	ND	3								
1,2,4-Trichlorobenzene	ND	2								
Naphthalene	ND	2								
Hexachlorobutadiene	ND	2								
1,2,3-Trichlorobenzene	ND	2								
Surr: 1,2-Dichloroethane-d4	10.6		10		106	75	128			
Surr: Toluene-d8	9.94		10		99	80	120			
Surr: 4-Bromofluorobenzene	9.08		10		91	80	120			



# Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778

(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:  
21-Mar-08

## OC Summary Report

Work Order:  
08031803

### Laboratory Control Spike

Type **LCS**

Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS10\DATA\080319\08031932.D**

Batch ID: **MS10W0319C**

Analysis Date: **03/19/2008 19:41**

Sample ID: **LCS MS10W0319C**

Units: **µg/L**

Run ID: **MSD\_10\_080319A**

Prep Date: **03/19/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	10.2	1	10		102	80	120			
Benzene	8.74	0.5	10		87	70	130			
Trichloroethene	9.16	1	10		92	70	130			
Toluene	9.65	0.5	10		97	80	120			
Chlorobenzene	9.68	1	10		97	70	130			
Ethylbenzene	9.19	0.5	10		92	80	120			
m,p-Xylene	9.4	0.5	10		94	70	130			
o-Xylene	10.1	0.5	10		101	70	130			
Surr: 1,2-Dichloroethane-d4	9.9		10		99	75	128			
Surr: Toluene-d8	10.3		10		103	80	120			
Surr: 4-Bromofluorobenzene	9.59		10		96	80	120			

### Sample Matrix Spike

Type **MS**

Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS10\DATA\080319\08031936.D**

Batch ID: **MS10W0319C**

Analysis Date: **03/19/2008 21:07**

Sample ID: **08031402-04AMS**

Units: **µg/L**

Run ID: **MSD\_10\_080319A**

Prep Date: **03/19/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	52.2	2.5	50	0	104	66	132			
Benzene	45.3	1.3	50	0	91	70	130			
Trichloroethene	70	2.5	50	25.3	89	69	130			
Toluene	47.9	1.3	50	0	96	67	130			
Chlorobenzene	47.4	2.5	50	0	95	70	130			
Ethylbenzene	44.8	1.3	50	0	90	70	130			
m,p-Xylene	46.6	1.3	50	0	93	69	130			
o-Xylene	49.5	1.3	50	0	99	70	130			
Surr: 1,2-Dichloroethane-d4	43.7		50		87	75	128			
Surr: Toluene-d8	48.5		50		97	80	120			
Surr: 4-Bromofluorobenzene	49.5		50		99	80	120			

### Sample Matrix Spike Duplicate

Type **MSD**

Test Code: **EPA Method SW8260B**

File ID: **C:\HPCHEM\MS10\DATA\080319\08031937.D**

Batch ID: **MS10W0319C**

Analysis Date: **03/19/2008 21:28**

Sample ID: **08031402-04AMSD**

Units: **µg/L**

Run ID: **MSD\_10\_080319A**

Prep Date: **03/19/2008**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
1,1-Dichloroethene	50.2	2.5	50	0	100	66	132	52.16	3.9(20)	
Benzene	45.2	1.3	50	0	90	70	130	45.25	0.2(20)	
Trichloroethene	72.4	2.5	50	25.3	94	69	130	70.02	3.4(20)	
Toluene	47.4	1.3	50	0	95	67	130	47.88	0.9(20)	
Chlorobenzene	46.7	2.5	50	0	93	70	130	47.4	1.4(20)	
Ethylbenzene	43.9	1.3	50	0	88	70	130	44.81	2.0(20)	
m,p-Xylene	46.2	1.3	50	0	92	69	130	46.59	0.8(20)	
o-Xylene	48.9	1.3	50	0	98	70	130	49.53	1.3(20)	
Surr: 1,2-Dichloroethane-d4	47.2		50		94	75	128			
Surr: Toluene-d8	49.1		50		98	80	120			
Surr: 4-Bromofluorobenzene	50.1		50		100	80	120			

### Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



## Billing Information :

## CHAIN-OF-CUSTODY RECORD

NV

Page: 1 of 1

## Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778  
TEL: (775) 355-1044 FAX: (775) 355-0406

WorkOrder : URS08031803

Report Due By : 5:00 PM On : 25-Mar-08

## Client:

URS Corporation  
811 Grier Dr.

## Report Attention

## Phone Number

## Email Address

Lisa Lowe (702) 492-7923 x lisa\_lowe@urscorp.com

EDD Required : No

Sampled by : Client

Cooler Temp

4 °C

Samples Received

18-Mar-08

Date Printed

18-Mar-08

Las Vegas, NV 89119  
PO :

Client's COC # : 22665

Job : 26698724

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix Date	No. of Bottles			Requested Tests										Sample Remarks
			Alpha	Sub	TAT	VOC_W										
URS08031803-01A	MW-32	AQ 03/17/08 15:10	3	0	5	8260_N										
URS08031803-02A	MW-31	AQ 03/17/08 16:12	3	0	5	8260_N										

## Comments:

Security seals intact. Frozen ice. Chain split into two separate work orders due to different TATs.:

Signature

Print Name

Company

Date/Time

Logged in by:

Cynthia Sauvageau Elizabeth Sauvageau

Alpha Analytical, Inc.

3-18-08 1043

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.  
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

